Claims

1. (Previously Presented) A single use medical imaging device that is removably connected to a control unit, comprising:

a shaft having a proximal end and a distal end,

a connector on the proximal end for connecting the device to a control unit;

an image sensor at or adjacent to the distal end of the device for producing images in a predefined format for receipt by an imaging board within the control unit;

a memory having a code stored therein that encodes a serial identifier uniquely associated with the imaging device; and

a transmit circuit that transmits the code to the imaging board in the format of the image signals produced by the image sensor.

2. (Previously Presented) The imaging device of Claim 1 wherein the memory is coupled to the image sensor.

3. (Previously Presented) The imaging device of Claim 1 wherein the memory is integrated within the image sensor.

4. (Previously Presented) The imaging device of Claim 1 wherein the code is embedded in an image of a verification object that is stored within the memory.

5. (Previously Presented) The imaging device of Claim 4 wherein the image of the verification object includes an image of a linear bar code.

6. (Previously Presented) The imaging device of Claim 4 wherein the image of the verification object includes an image of a two-dimensional bar code.

7. (Previously Presented) The imaging device of Claim 4 wherein the verification object image further includes a set of calibration objects.

8. (Previously Presented) A control unit for authorizing a single use medical imaging device comprising:

a connector for connecting the control unit to the single use medical imaging device;

a device interface capable of receiving a code in a format of an image signal produced by the image sensor within the medical imaging device, wherein the code encodes a serial identifier uniquely associated with the imaging device;

a processor that decodes the serial identifier from the image signal; and

means for determining if the single use imaging device is authorized based upon the serial identifier associated with the device.

9. (Previously Presented) The control unit of Claim 8, wherein the code is embedded in an image of a verification object.

10. (Previously Presented) The control unit of Claim 8, wherein the verification object further comprises one or more patterns to calibrate the single use imaging device.

11. (Previously Presented) The control unit of Claim 8, wherein the verification object further comprises one or more patterns to functionally test the single use imaging device.

12. (Previously Presented) A medical imaging system comprising:

a single use medical imaging device, having a shaft with a proximal end and a distal end;

a connector on the proximal end for connecting the device to a control unit;

an image sensor at or adjacent to the distal end for producing images in a predefined format for receipt by an imaging board within the control unit;

an image of a verification object encoding a serial identifier uniquely associated with the device;

a transmit circuit that transmits the image of the verification object to a control unit in the predefined format of the image signals produced by the image sensor;

a control unit for authorizing a single use medical imaging device including:

a connector for connecting the control unit to a single use medical imaging device;

a device interface capable of receiving an image of the verification object in the predefined format of an image signal produced by the image sensor of the medical imaging device;

a processor that determines if the single use imaging device is authorized based upon the serial identifier associated with the device.

13. (Previously Presented) The system of Claim 12, wherein the image of the verification object image is stored in the memory of the single use device.

14. (Previously Presented) The system of Claim 12, wherein the verification object is printed on a test target uniquely associated with the single use device at the time of manufacture.

15. (Previously Presented) The system of Claim 12, wherein the means for determining if the imaging device is authorized compares the serial identifier to a registry contained in a remote database accessible from the control unit to determine if the device associated with the unique identifier has ever been used before.

16. (Previously Presented) The medical imaging system of Claim 12 wherein the verification object image includes a linear bar code.

17. (Previously Presented) The medical imaging system of Claim 12 wherein the verification object image includes a two-dimensional bar code.

18. (Previously Presented) The medical imaging system of Claim 12 wherein the verification object image further includes a set of calibration objects.

19. (Previously Presented) The medical imaging system of Claim 18 wherein the calibration objects are printed on a test target at various deflection angles.

20. (Previously Presented) A method for authorizing a single use imaging device comprising:

connecting the single use imaging device to a control unit;

electronically obtaining an image of a prerecorded verification object associated with the imaging device wherein the verification object image encodes a serial identifier;

extracting the serial identifier from the image of the verification object; and

authorizing the use of the imaging device by comparing the serial identifier to a database containing information on authorized serial identifiers, wherein a match between the serial identifier and information in the database results in authorization for use.

21. (Previously Presented) The method of Claim 20 wherein the image of the prerecorded verification object is obtained using the electronic imaging element of the imaging device.

22. (Previously Presented) The method of Claim 20 wherein the prerecorded verification object is printed on a test target uniquely associated with the device at the time of manufacture.

23. (Previously Presented) The method of Claim 20 wherein the database is a registry at a remote central server.

24. (Previously Presented) The method of Claim 20 wherein the verification object encodes a unique serial identifier and a set of calibration objects.

25. (Previously Presented) The method of Claim 24 wherein the calibration objects are printed on a test target at various deflection angles.

26. (Previously Presented) A method of automatically authorizing and self-testing a medical device containing an image element comprising the steps of:

recognizing the medical device as authorized based upon electronic detection of an image of a prerecorded verification object;

automatically calibrating the device using calibrating features included in the verification object;

functionally testing the device; and

activating the device upon successful authorization, calibration and functional testing.

27. (Previously Presented) The method of Claim 26, wherein a registry records the results of the calibration and functional testing of the medical device.

28. (Canceled) A method of serializing a set of single use imaging devices comprising:

assigning a unique serial identifier to each imaging device to be manufactured;

encoding the serial identifier in a verification object, wherein the verification object also includes a set of calibration objects;

associating the verification object with each corresponding imaging device at the time of manufacture; and

maintaining a registry of authorized serial identifiers corresponding to manufactured serialized imaging devices wherein a user of an imaging device may determine if the device is authorized by comparing the serial identifier to the database.